

LEONOV, L.F.

SUBJECT

PERIODICAL

USSR / PHYSICS

CARD 1 / 2

PA - 1260

AUTHOR TITLE

DERJAGIN, B.V., PROCHOROV, P.S., BATOVA, G.A., LEONOV, L.F.

The Diffusion Hygrometer.

Zurn. techn. fis, 26, fasc. 4, 887-894 (1956)

Publ. 4 / 1956 reviewed 9 / 1956

The diffusion hygrometers described here are based upon the fact that in the chamber of the device containing a dry and a humid substance (and which is separated from the material to be investigated by a porous wall) under- or overpressure is produced while the diffusion current is steady. Here 4 varieties of these hygrometers are described each of which may have its own particular sphere of action. The two chamber hygrometer consists of two chambers which are separated from the surrounding atmosphere by uniform porous separating walls (of coal or mipor). Construction and mode of operation of the device are described. Using the two chamber hygrometer is complicated by the necessary determination of the apparatus constant K, the necessity of knowing atmospheric pressure, the diffusion coefficient, and air humidity. The three chamber hygrometer: In order to make the apparatus constant of the hygrometer independent of temperature and pressure, PROCHOROV and DERJAGIN suggested a three chamber hygrometer. The first chamber is dry, the second and third are used for compensation. Construction and operation of the apparatus are discussed. By means of this hygrometer it is possible to determine humidity independent of temperature and atmospheric pressure, above all also in the case of negative temperature. Next, hygrometers with assumed

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124-58-9-10057

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 9, p 88 (USSR)

AUTHORS: Batova, G. A., Deryagin, B. V., Leonov, L. F., Nikol'skiy, A. P.,

Prokhorov, P.S.

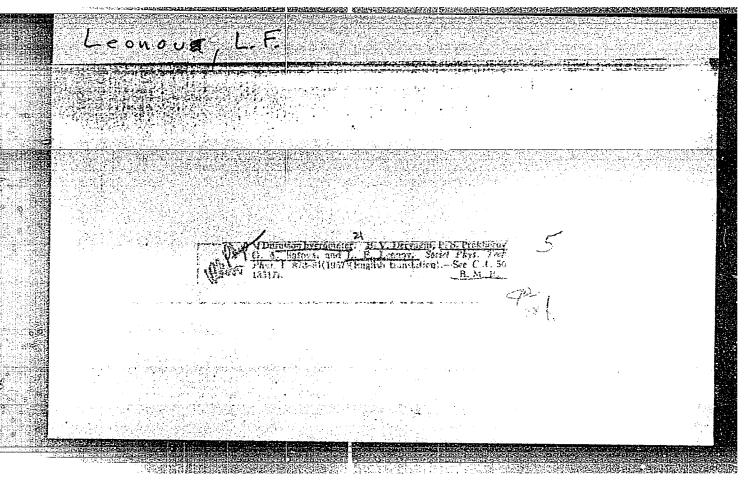
TITLE: Diffusion Hygrometers (Diffusionnyye gigrometry)

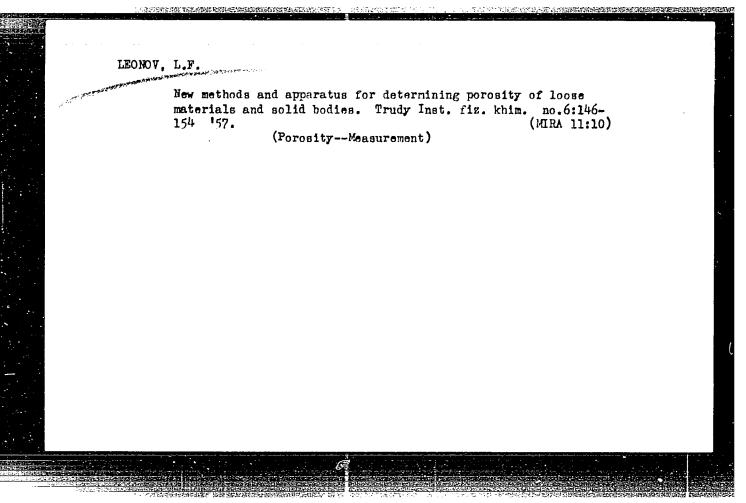
PERIODICAL: V sb.: Issled. oblakov, osadkov i grozovogo elektrichestva. Leningrad, Gidrometeoizdat, 1957, pp 189-191

ABSTRACT: Bibliographic entry

> 1. Hygrometers--Equipment 2. Diffusion

Card 1/1





PROKHOROV, P.S. and LEONOV, L.F. (Inst. of Phys. Chem., AS USSR)

"The Study of Long Distance Forces Acting Between Water Drops and Non-volatile Particles."

paper submitted at the meeting of The Faraday Society, Bristol, England, 13-15 Sep '60

LEONOV, L.F. 82880 S/120/60/000/c2/011/052 F032/E314 ichko, M.V. and 24,6810 Deryagin, B.V., Prokhorov,

AUTHORS: A <u>Diffusion Chamber</u> with Supersaturation Which is Leonov, L.F.

Constant Both in Space and Time TITLE:

Pribory i tekhnika eksperimenta, 1960, No 2, PERIODICAL:

pp 45 - 47 (USSR)

The supersaturation in a Wilson chamber disappears rather rapidly owing to the unavoidable condensation ABSTRACT: of vapour on the walls and also due to heat transfer.

In diffusion chambers supersaturation is constant in time, but not in space. The method suggested in the present paper is free from these two disadvantages and can be used to obtain supersaturation which is constant both in time and in space. The idea is to use a periodic variation of the temperature of the walls of the chamber. The problem is formulated as follows. It is assumed that the walls are always moist

and the flow of liquid down the walls can be neglected.

Under these conditions the thickness of the layer of Cardl/5

moisture is constant. If one neglects the heat transfer

CIA-RDP86-00513R000929230002-4" **APPROVED FOR RELEASE: 07/12/2001**

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S/120/60/000/C2/011/052

A Diffusion Chamber with Supersaturation E032/E314 in Space and Time

associated with diffusion then the periodic change in the temperature of the walls will produce a heat wave propagated into the chamber. If the temperature of the walls is known then one can calculate the density of the vapour as a function of time. If the period of the temperature oscillations on the walls of the chamber is taken to be sufficiently short, then the temperature and diffusion waves are damped out in the neighbourhood of the walls and most of the volume of the chamber is maintained at an average temperature and density which can be expressed in terms of the temperature variation on the walk. If the amplitude of the temperature oscillations on the walls is small, the mean density of vapour in the chamber will be equal to the saturation vapour density at the average temperature of the walls and, consequently, the supersaturation will be equal to unity. At larger amplitudes of the temperature oscillations, the supersaturation will be greater than unity.

Card2/5

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s/120/60/000/02/011/052

A Diffusion Chamber with Supersaturation Which is Constant Both in Space and Time

The supersaturation will increase with the amplitude of the oscillations in the temperature of the walls. A chamber based on these ideas is shown in Figure 2. The working walls 1 were made of aluminium foil 0.05 mm in thickness and were in the form of squares 200 x 200 mm. These walls were attached to the perspex frame 2 which was 50 mm thick. The heat waves are practically damped out at a distance of 3 mm from the wall when the period of 1 sec is used. The side walls formed by the frame are kept at the average temperature of the chamber. This tends to reduce side effects but does not eliminate them altogether, so that the working volume is smaller than the geometrical volume. The heat was applied by passing short but large current pulses (of the order of a few hundred amperes) through leads in thermal contact with the aluminium walls. The heat was removed by copper vessels 6 (Figure 2) filled with a mixture of acetone or alcohol and solid carbon dioxide. The thermal contact between the refrigerator and the aluminium wal

Card3/5

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	A Diffusion Ch	namber with Supersaturation which
	in Space and T ASSOCIATION:	Institut fizicheskoy khimi AN SSSP (Institute of Physical Chemistry of the Academy of Sciences of the USSR)
	SUBMITTED:	March 9, 1959
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A Diffusion Chamber with Supersaturation Which is Constant Both

of the chamber was through a thin paper layer 7. The rate of cooling could be adjusted by varying the thickness of this paper. This construction was used to obtain a temperature change of ± 3°C with a period of 1 sec at an average temperature of 20°C. The chamber was heated for 0.2 sec and cooled for 0.8 sec. The supersaturation in the chamber calculated from these data should be about a larger amplitude in the temperature oscillations is atmospheric processes since the supersaturation in the rarely exceeds 1%. Figure 3 shows the dependence of the supersaturation on the temperature amplitude for there are 3 figures.

Card 4/5

FHASE I BOOK EXPLOITATION SOV/5590

**Konferentsiya po poverkhnostnym silam, Moscow, 1960.

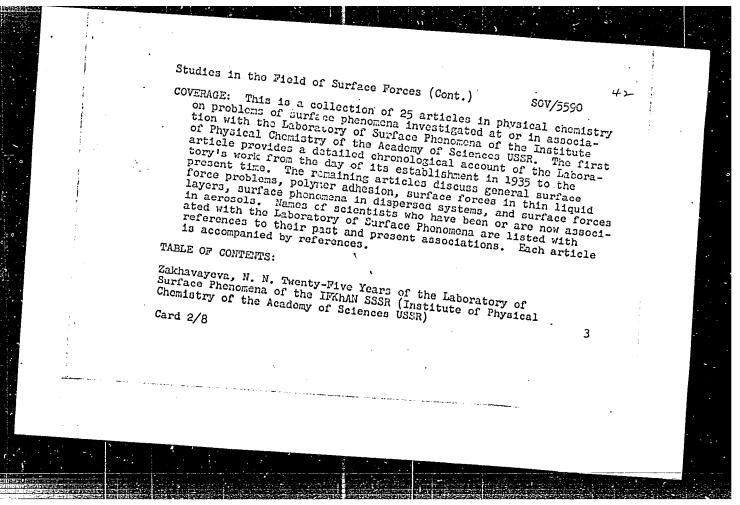
Issledovaniya v oblasti poverkhnostnym silam, aprell 1960 g. (Studies in the Field of Surface Forces; Collection of Reports of the Conference on Surface Forces; Hold in April 1950) Moscow, Indivo MN SSSR, 1961. 231 p. Errata printed on the inside of back cover. 2500 copies printed.

Sponsoring Agency: Institut fizicheskoy khimii Akademii nauk SSSR.

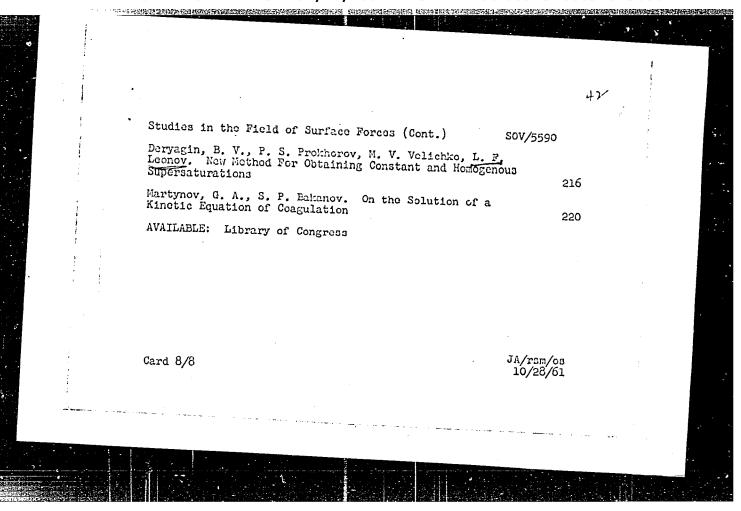
Resp. Ed.: B. V. Doryagin, Corresponding Member, Academy of Sciences USSR; Editorial Board: N. N. Zakhavayeve, N. A. Kretova, M. K. Kusakov, S. V. Nerpin, P. S. Prokherov, N. V. Talayev and G. I. Puks; Ed. of Publishing House: A. L. Bankvitser; Tech. Ed.:

PURPOSE: This book is intended for physical chemists.**

Card 1/8



		42	i i
:	Studies in the Field of Surface Forces (Cont.) SOV/5	590	:
: 	Talayev, M. V., B. V. Deryagin, and N. N. Zakhavayeva. Experimental Study of the Filtration of Rarefied Air Through Porous Bodies in a Transitional Area of Pressures	187	
444	Deryagin, B. V., N. N. Zakhavayeva, M. V. Talayev, B. N. Parfanovich, and Ye. V. Makarova. Metallic Device for Determining the Specific Surface of Powdered and Porous Bodies	190	
:	V. SUMPACE FORCES IN AEROSOLS		
	Deryagin, B. V., S. P. Bakanov, S. S. Dukhin, and G. A. Batova. Diffusiophoresis of Aerosol Particles	197	
: : :	Bakanov, S. P., and B. V. Doryagin. Behavior of a Small Aerosol Particle in a Fonuniformly Heated Mixture of Gasos	202	:
	Strozhilova, A. I. Differential Counter of Condensation Nuclei	209	<u>:</u> •
	Card 7/8		



APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929230002-4"

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5/169/62/000/010/035/071 D228/D307

AUTHORS:

Prokhorov, P.S. and Leonov, L.F.

TITLE:

Investigation of diffusive long-range action forces between water drops and nonvolatile particles

PERIODICAL:

Referativnyy zhurnal, Geofizika, no. 10, 1962, 11, abstract 10B69 (In collection: Issled. oblakov, osadkov i grozovogo elektrichestva, M., AN SSSK,

1961, 83-87)

The experimental set-up for measuring diffusive long-range forces between water drops and a 1 mm diameter silvered globule is described together with some results of the research. The measurements were made with a torsion balance. This had a sensitivity of 0.4·10-9 g and was fitted with an autocollimation raster photorelay, an amplifier, and an electronic recording potentiometer. The droplet and the globule were grounded during the measurements in order to obviate the possibility of the induction of the electrostatic charges. The diffusive forces were determined (after elimin-Card 1/2

CIA-RDP86-00513R000929230002-4" **APPROVED FOR RELEASE: 07/12/2001**

Investigation of diffusive ...

S/169/62/000/010/035/071 D228/D307

ating the influence of convection currents) at a differing humidity of the surrounding medium and at different distances. No diffusive forces were detected when the surrounding medium was fully saturated with water vapor. If the humidity is nil, considerable diffusive forces appear, and their magnitude depends on the distance. At 40% humidity the diffusive forces are considerable, but their abatement is more marked than is the case with zero humidity. In this event the diffusive forces are inversely proportional to the square of order of magnitude of the repulsive forces amounts to 1.10-9 g. On and the forces grow more slowly. The experimental data cited agrees well with the theory, developed by B.V. Deryagin and S.S. Dukhin.

Card 2/2

PROKHOROV, P.S.; LEONOV, L.F.

Study of long-range diffusion forces between water droplets and nonvolatile particles [with summary in English]. Koll. zhur. 23 no.4:464-468 Jl-Ag '61. (MIRA 14:8)

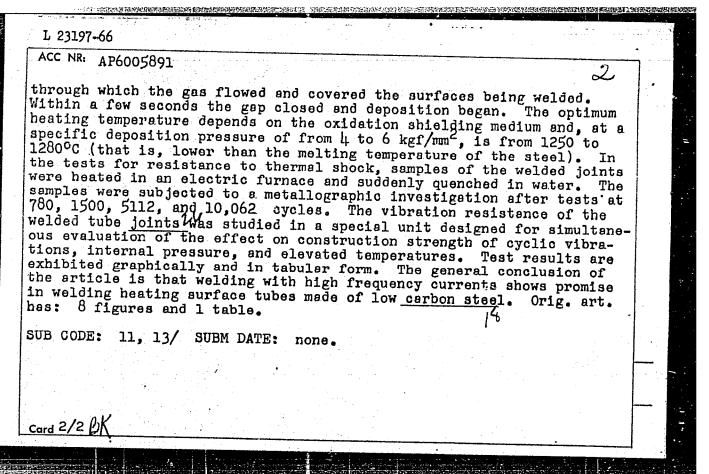
l. Institut fizicheskoy khimii AN SSSR, Moskva. (Diffusion)

PROKHOROV, Petr Sergeyevich; LEONOV, L. F.

"Experimental study of diffusion forces"
To be presented at the First National Conference on Aerosols -Liblice, Czechoslovakia, 8-13 Oct 1962

Inst. of Physical Chemistry, Acad. of Sci. USSR, Moscow

		096/65/000/011/0067/0070 #8 .
10000	Ratner, A. V. (Candidate of technical sciences); Leoncya, L. ; Borovin, G. K. (Engineer).	sciences); Mazel', R. Ye.
ORG: Al institut	-Union Heat Technology Institute (Vse	esoyuznyy teplotekhnicheskiy
	Construction strength of welded joints	1
	Teploenergetika, no. 11, 1965, 67-70 S: welding technology, high frequence	i i
ABSTRACT	Joints in tubes with a diameter as	04.
currents was done	as well as by the contact method. The under the following conditions:	done with high frequency e high frequency welding
oxidation gas, fed	generator-60 kilowatts; frequency-8,0 was done with a gas consisting of 15 at a rate of 1.5 liters/sec through t eating, there was a gap of 1 mm betwe	00 cycles. Shielding from ————————————————————————————————————
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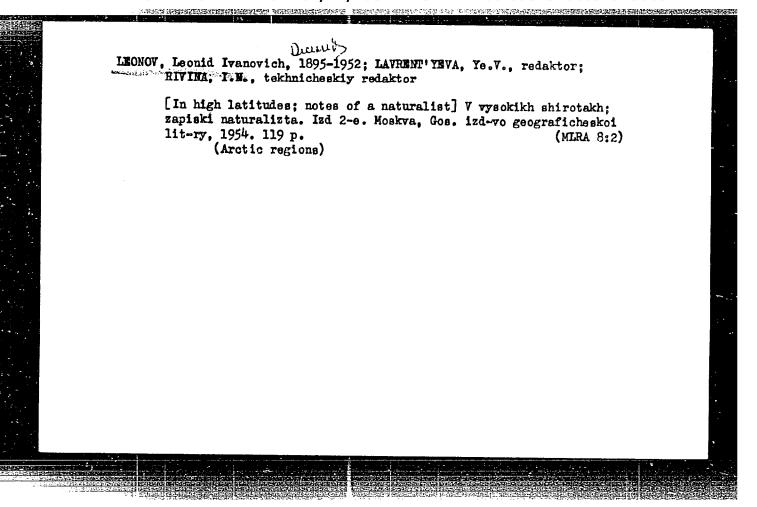
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TOVPENETS, Ye.S., kandidat tekhnicheskikh nauk; PISKUN, V.I., inzhener; SHAERCHENKO, L.B., inzhener; GULYACHENKO, P.P., inzhener; LEONOV, L.I., inzhener; POTAPOV, I.F., inzhener.

Improving the quality of the cutting teeth of cutting machines and of combined mining machines. Ugol' 29 no.10:23-26 0 '54 (MIRA 7:11)

1. Donetskiy industrial'nyy institut (for Tovpenets & Piskun) 2. Krasnoluchskiy mashinostroitel'nyr zavod (for Shlepchenko, Gulyachenko & Leonov) 3. Kombinat Stallnugol' (for Potapov)

(Goal--Mining machinery)



LEONOV, L.M.

NAZAREVSKIY, S.I.; MAKAROV, S.N.; PILIPENKO, F.S.; GERASIMOV, M.V.; IL'INSKAYA, M.L.; VEKSLER, A.I., [deceased]; VASIL'YEY, I.M.; IL'INA, N.V.; SOKOLOV, S.Ya.; LOZINA-LOZINSKAYA, A.S.; SAAKOV, S.G.; ZALESSKIY, D.M.; AVRORIN, N.A.; IVANOV, M.I.; PRIKIADOV, N.V.; SOBOLEVSKAYA, K.A.; SALAMATOV, M.N.; MALINOVSKIY, P.I.; LUCHNIK, A.I.; KRAVCHENKO, O.A.; VEKHOV, N.K.; GROZDOV, B.V.; MASHKIN, S.; BOSSE, G.G.; PALIN, P.S.; (g. Shuya, Ivanov-skoy oblasti); MATUKHIN; ZATVARNITSKIY, G.F.; GRACHEV, N.G.; CHERKASOV, M.I.; KIRKOPULO, Ye.N.; LEVITSKAYA, A.M.; GRISHKO, N.N.; LIKHVAR', D.F. VIL'CHINSKIY, N.M.; LYPA, A.L.; OREKHOV, M.V.; SHCHERBINA, A.A.; TSYGANKOVA, V.Z.; BARANOVSKIY, A.L.; GEORGIYEVSKIY, S.D.; STEPUNIN, G.A. OZOLIN, E.P.; LUKAYTENE, M.K.; KOS, Yu.I.; VAIL'YEV, A.V.; RUKHADZE, P.Ye.; VASHADZE, V.N.; SHANIDZE, V.M.; MANDZHAVIDZE, D.V.; KORKESHKO, A.L.; KOLESNIKOV, A.I., (g. Sochi); SERGEYEV, L.I.; VOLOSHIN, M.P.; RYBIN, V.A.; IVANOVA, B.I.; RYABOVA, T.I.; GAREYEV, E.Z.; RUSANOV, F.N.; BOCHANTSEVA, Z.P.; BLINOVSKIY, K.V.; KLYSHEV, L.K.; MUSHEGYAN, A.M.; LEONOV, L.M.

Talks given by participants in the meeting. Biul.Glav.bot.sada no.15: 85-182 '53. (MLRA 9:1)

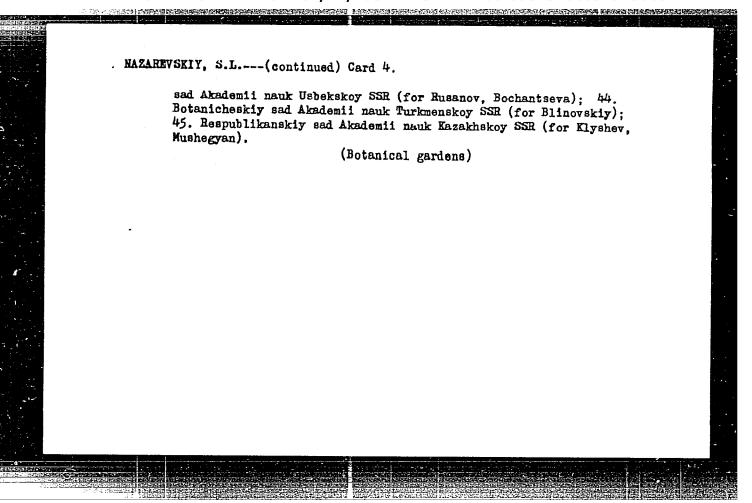
1. Glavnyy botanicheskiy sad Akademii nauk SSSR (for Makarov, Pilipenko, Gerasimov, Il'inskaya. Veksler); 2. Akademiya komunal'nogo khozyaystva imeni K.D. Pamfilova for Vasil'yev); 3. Vsesoyuznaya sel'skokhozyaystvennaya vystavka (for Il'ina); 4. Botanicheskiy sad Botanicheskogo instituta imeni V.L.Komarova Akademii nauk SSSR (for Sokolov, Lozina-Lozinskaya, Saakov); 5. Botanicheskiy sad Leningradskogo (continued on next card)

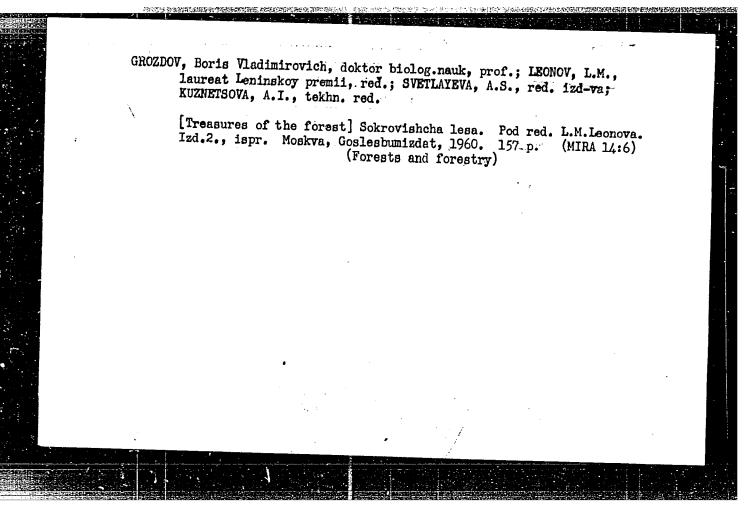
NAZAREVSKIY, S.L .-- (continued) Card 2.

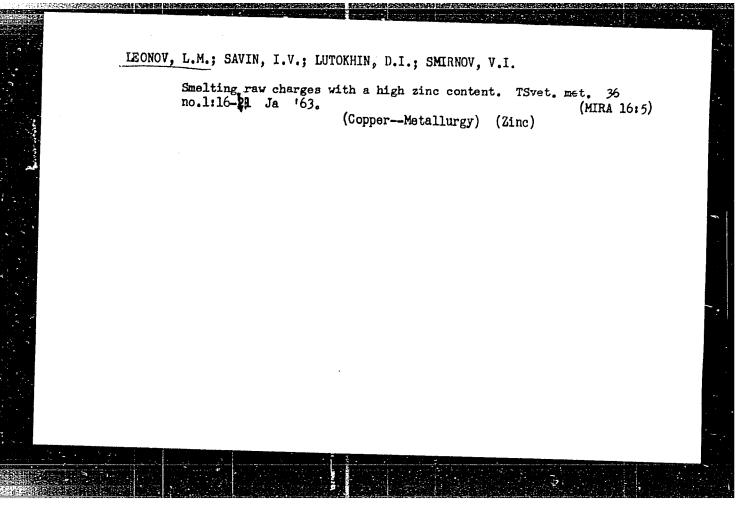
gosudarstvennogo ordena Lenina universiteta (for Zalesskiy); 6. Pol = yarno-Al'piyskiy botanicheskiy sad Kol'skogo filiala imeni S.M. Kirova Akademii nauk SSSR (for Avrorin); 7. Botanicheskiy sak pri Tomskom gosudarstvennom universiteta (for Ivanov); 8. Botanicheskiy sad pri Tomskom gosudarstvennom universite ... imeni V.V. Kuybysheva (for Prikladov); 9. TSentral nyy Sibirskiy totanicheskiy sad Zapadno-Sibirskogo filiala Akademii nauk SSSR (for Salamatov, Sobolevskaya); 10. Botanicheskiy sad Irkutsko gosudarstvennogo universiteta imeni A.A. Zhdanova (for Malinovskiy); 11. Altayskaya plodovo-yagodnaya opytnaya stantsiya (for Luchnik); 12. Bashkirskiy botanicheskiy sad (for Kravchenko); 13. Lesostepnaya selektsionnaya opytnaya stantsiya dekorativnykh kul'tur tresta Goszelenkhoz Ministerstva kommunal'nogo khozyaystva RSFSR (for Vekhov); 14. Bryanskiy lesokhozyaystvennyy institut (for Grozdov); 15. Botanicheskiy sad pri Voronezhskom gosudarstvennom universitete (for Mashkin); 16. Orekhovo-Zuyevskiy pedago-gicheskiy institut (for Bosse); 17. Botanicheskiy sad pri Rostovskom gosudarstvennom universitete imeni V.M. Molotova (for Matukhin); 18. Botanicheskiy sad Kuybyshevskogo gorodckogo otdela narodnogo obrazovaniya (for Zatvarnitskiy): 19. Zoobotanicheskiy sad pri Kazanskom universitete (for Grachev): 20. Gosudarstvennyy respublikanskiy proektnyy institut "Giprokommunstroy" (for Cherkasov); 21. Botanicheskiy sad Odesskogo gosudarstvennogo universiteta imeni I.I. Mechnikova (for Kirkopulo); 22. Botanicheskiy sad pri Dnepropetrovskom gosudarstvennom universitete (for Levitskaya); 23. Botanicheskiy sad (continued on next card)

NAZAREVSKIY, S.L .-- (continued) (ard 3.

Akademii nauk USSR (for Grishko, Likhvar', Vil'chinskiy); 24. Kiyevskiy sel'skokhozyaystvennyy institut (for Lypa); 25. Botanicheskiy sad Chernovitskogo gosudarstvennogo universiteta (for Orekhov); 26. Botanicheskiy sad pri L'vovskom gosudarstvennom universitete imeni Iv. Franko (for Shcherbina); 27. Botanicheskiy sad Khar'kovskogo gosudarstvennogo universiteta imeni A.M. Gor'kogo (for TSygankova); 28. Botanicheskiy sad Zhitomirskogo sel'skokhozyaystvennogo instituta (for Baranovskiy); 29. Botanicheskiy sad Akademii nauk Belorusskoy SSR (for Georgiyevskiy); 30. Institut biologii Akademii nauk Belorusskoy SSR (for Stepunin); 31. Botanicheskiy sad Akademii Litovskoy SSR (for Lukaytene); 32. Botanicheskiy sad Latviyskogo gosudarstvennogo universiteta (for Ozolin); 33. Kabardinskiy krayeved-cheskiy botanicheskiy sad (for Kos); 34. Sukhumskiy botanicheskiy sed Akademii nauk Gruzinskoy SSR (for Vasil'yev, Rukhadze); 35. Batumskiy botanicheskiy sad Akademii nauk Gruzinskoy SSR (for Shanidze); 36. Tbilisskiy botanicheskiy sad Akademii nauk Gruzinskoy SSR (for Mandzhavidze); 37. Sochinskiy park Dendrariy (for Korkeshko); 38. Gosudarstvennyy Nikitskiy botanicheskiy sad imeni V.M. Molotova (for Sergeyev, Voloshin); 39. Krymskiy filial Akademii nauk SSSR (for Rybin); 40. Betanicheskiy sad Moldavskogo filiala Akademii nauk SSSR (for Ivanova); 41. Botanicheskiy sad Botanicheskogo instituta Akademii nauk Tadzhikskoy SSR (for Ryabova); 42. Botanicheskiy sad Kirgizskogo filiala Akademii nauk SSSR (for Gareyev); 43. Botanicheskiy (continued on next card)







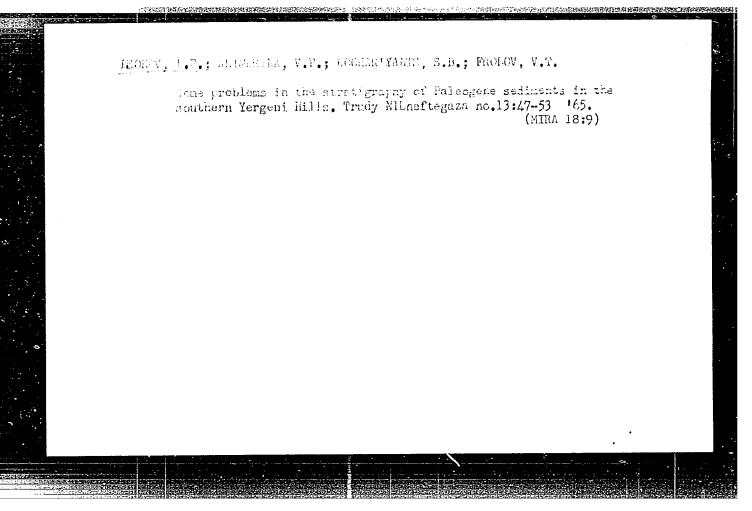
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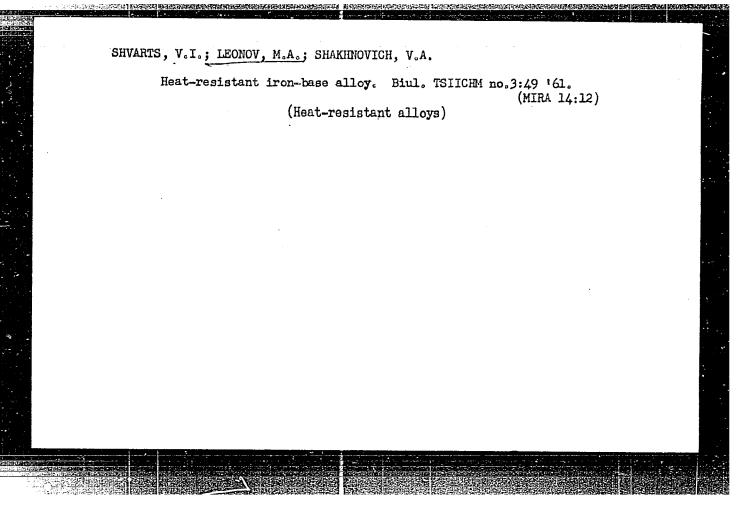
BUKH, Igor' Naumovich; VERIGIN, V.N.; ZAYCHIKOV, V.V.; LEONOVA, I.N.;
POLOSINA, G.V., red.; PYATAKOVA, N.D., tekhn. red.

[Electronic multiplying attachment for the T-5MU tabulator;
a transistorized device] Elektronnaia umnozhaiushchaia pristavka k tabuliatoru T-5mu; ustroistvo na poluprovodnikovykh priborakh. Moskva, Gosstatizdat, 1963. 116 p.

(MIRA 16:8)

(Electronic computers)





LECNOV, M. F.

Omsk Frovince - Bee Culture

What armchair ranagement leads to. Pchelovodstvo. 29 no. 9, 1952.

MONTHLY LIST OF RUSSIAN ACCESSIONS, LIBRARY OF CONGRESS. NOVEMBER, 1952. Unclassified.

LEONOV, M.F.

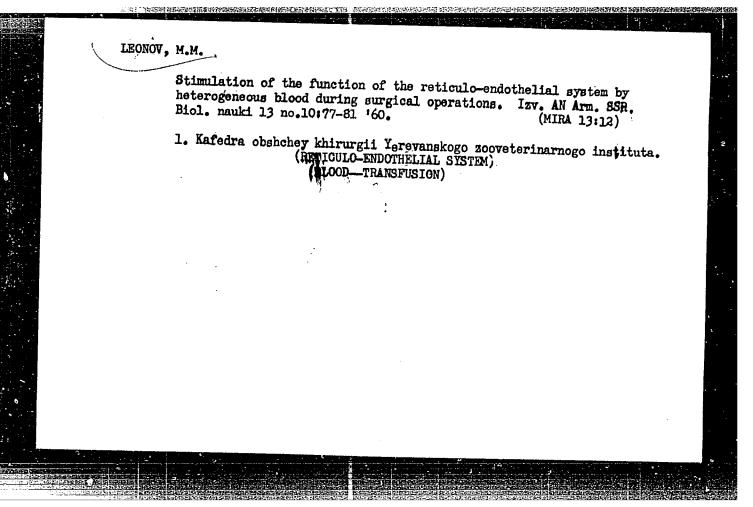
Bee Culture - Cmsk Province
What armchair management leads to. Pchelovodstvo 29 no. 8, 1952.

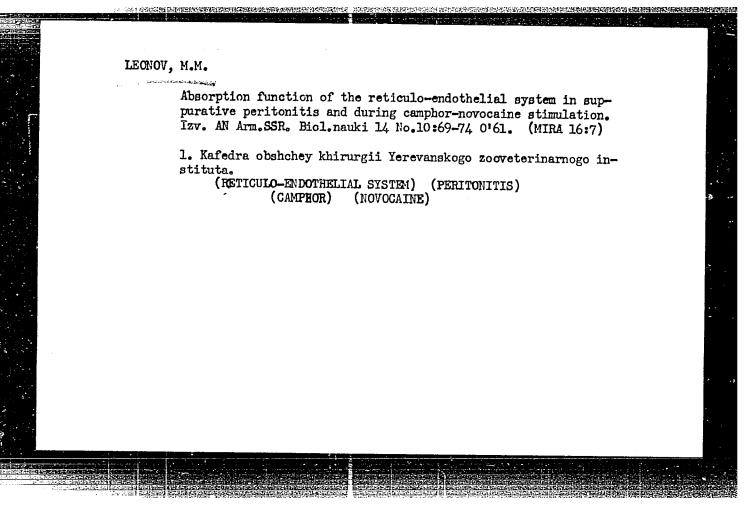
Monthly List of Russian Accessions, Library of Congress, November 1952. Unclassified.

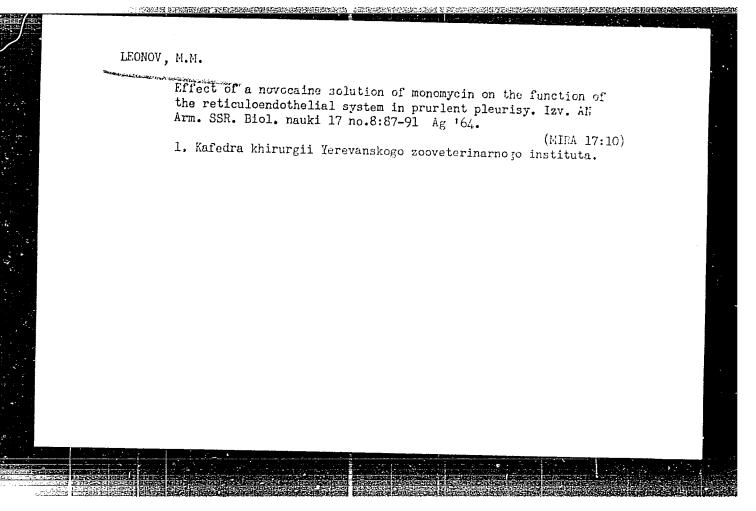
LEONOV, M. M. and KRIVOSHTA, Ye. Ye.

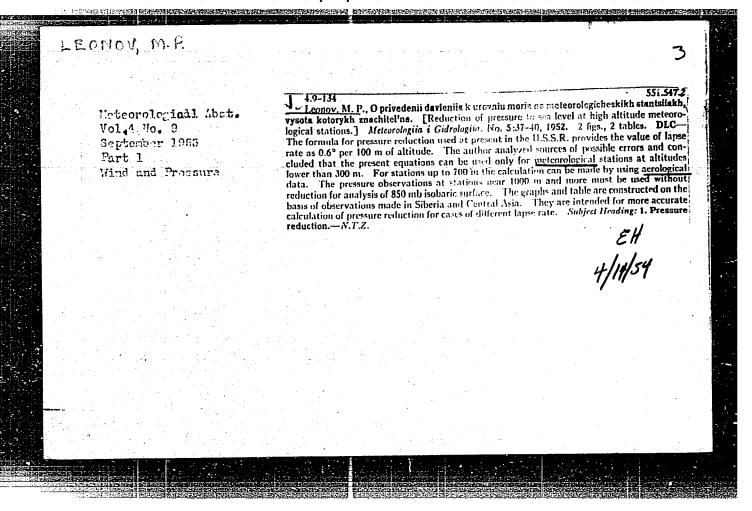
"Use of vaporization in surgery processes under battle-field conditions," In symposium:
Nauch.-prakt. raboty voyen-vet. sluzhby, Moscow, 1948, p. 11-14

SO: U-3850, 16 June 53, (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949).









LEONOV, M. P.

"The Vertical Structure of Baric Centers".

Trudy Odessk. gidromet. in-ta, no 5, pp 60-70, 1953.

The results of an investigation of trajectories of baric systems, their profiles, and also the magnitude and degree of agreement of simultaneous variations in geopotential at various levels are given on the basis of synoptic and altitudinal maps for the period from 1948 to 1951. Anticyclones occur at first near the ground, and are then propagated to considerable heights; their disruption also begins off the surface of the earth. Distinguishable are two types of anticyclones, depending upon their origin, character of the trajectories of the ground center and altitude center, and the type of process that unites the ground center and altitude center, and the type of process that unites the ground center with the altitude center. The author proposes to consider the process of transformation of altitudinal deformational fields either as a process of conversion of low baric formation into an altitudinal one or as the regeneration of an altitudinal formation. He proposes that the criteria of future transformation should be sought on the maps of lower lying levels. (RZhGeol, No 7, 1955)

SO: Sum No 884, 9 Apr 1956

IECNOV, M.P.

"Thermal Advection in the Atmosphere" Tr. Odessk, Gidromet. in-ta, No 5, 1954, 47-59

Methodic analysis is devoted to clarification of the thermal advection and its application to practical synopsis. The plotting of zero-lines of geostrophic heat advection is suggested in the layer of 1,000 to 500 mbar. These lines should be classified according to cold or hot advection and their distribution analyzed. (RZhFiz, No 10, 1955)

WEONOV, M.P.

USSR/Physics of the Atmosphere -- Synoptic Meteorology and Climatology, M-3

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 36130

Author: Leonov, M. P.

Institution: None

Title: On the Features of the Spatial Structure of Cyclones

Original

Periodical: Tr. Odessk. gidrometeorol. in-ta, 1955, No 7, 39-46

Abstract: One distinguishes between 3 types of baric formations: (1) lowdeveloped, having closed isographs only below AT-700; (2) highdeveloped, which can be traced in all levels; and (3) altitude, which differ only at the upper levels and having no surface portion. Over Europe and the adjacent regions, 50 cases of moving developing cyclones were investigated. It was established that limit/2 offall cases an undisturbed flow at altitudes AT-700 corresponds to the cyclone at the earth at the start of its development, and that approximately in 1/3 of all cases the presence of the cyclone is shown at all levels simultaneously. The altitude-variation of the value

Card 1/3

USSR/Physics of the Atmosphere - Synoptic Meteorology and Climatology, M-3

Abst Journal: Referat Zhur - Fizikay No 12, 1956, 36130

Abstract: of the average and extremal deepening of the cyclone from the instant it occurs to the stage of maximum development displays 2 peaks on the surfaces of 700 and 300 mb. With this, the phase of the maximum deepening at the altitudes lags with the altitude; at the 850 mb surface the average length of delay is 23 hours, at 300 mb -- 33 hours. The average duration of the existence of moving cyclones diminishes from 3.7 days at the 1,000 mb surface to 2.7 days at the 300 mb surface. With the usual western transfer the trajectory of the surface center is principally parallel to the south of the trajectory of the altitude center, with this the projections of the trajectories on the horizontal plane approach each other in the middle stage of the process, and the slope of the spatial axis increases, and the cyclone fills up. In the final stage, there occurs sometimes a removal of the altitude center from the surface one, which may lead to a splitting of the storm into a surface and an altitude part. In the case of the meridianal transfer one observes that the trajectories of the surface and the altitude centers intersect, and therefore the slope of the spatial axis changes from "left" to "right." Finally, one encounters trajectories that are

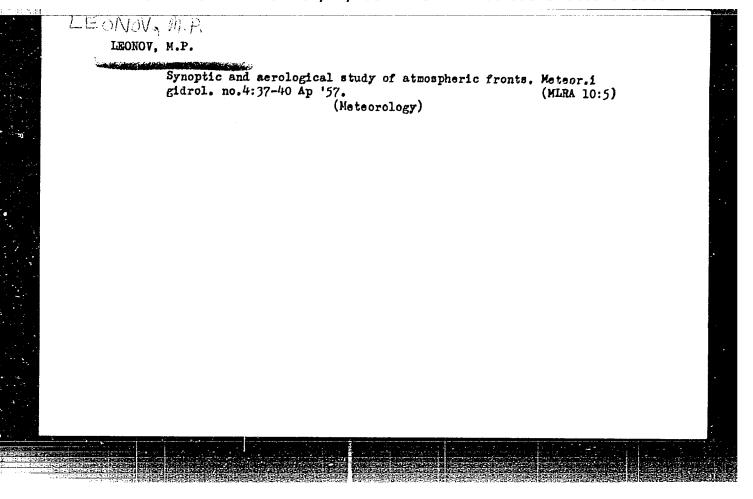
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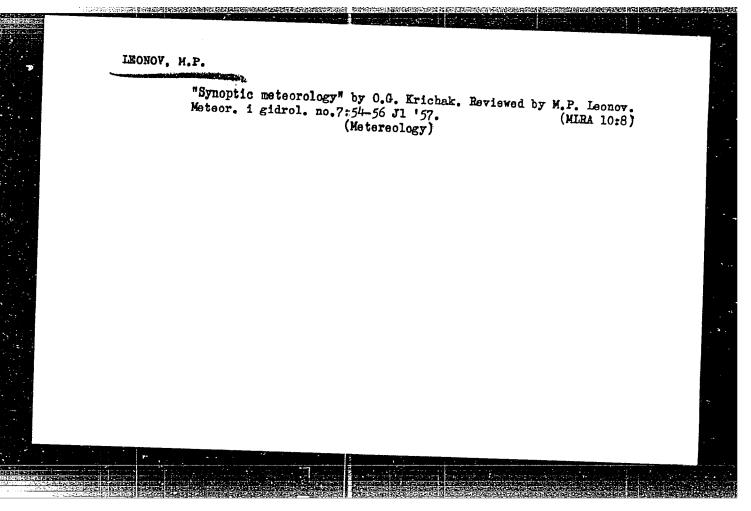
USSR/Physics of the Atmosphere - Synoptic Meteorology and Climatology, M-3

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 36130

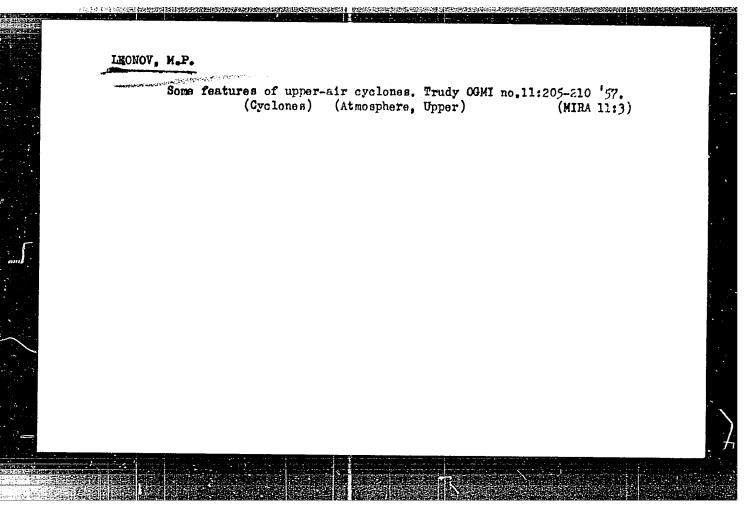
Abstract: directed in opposition. In these cases the surface centers describe loops with a considerable cyclonical or anticyclonical curvature. Conversion of the trajectories of the surface centers with the equal-altitude lines of various altitudes has shown that the impending 12-hour trajectories are in best agreement with the equal-altitude lines AT-700 and AT-500, deviating from them by not more than 10-20 in 60-80% of all cases, particularly in the last stage.

Card 3/3

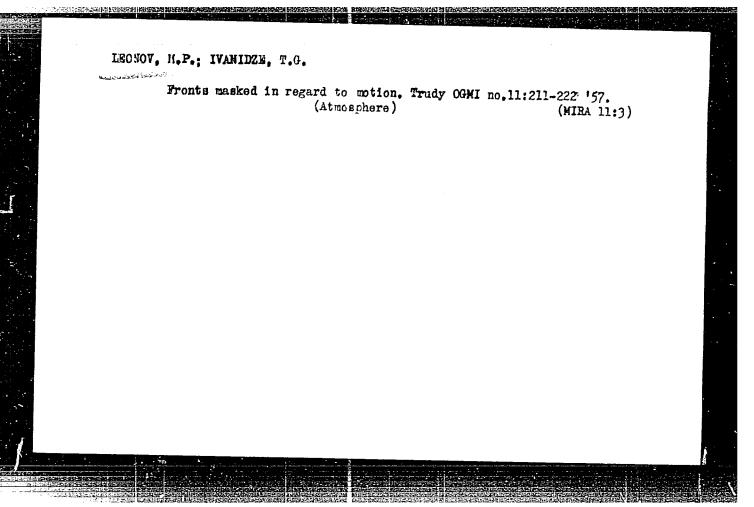




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APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929230002-4"

AUTHOR: Leonov, M.P. 50-58-5-7/20

TITLE: The Cold Front in the Front Part of the Cyclone (Kholodnyy

front v peredney chasti tsiklona)

PERIODICAL: Meteorologiya i Gidrologiya, 1958, Nr 5, pp 37 - 40

(USSR)

ABSTRACT: On January 3-4, 1958 a cyclone passed above the Baltic Sea

which caused heavy rainfall and storms in the neighboring regions. The present paper is devoted to the motion of the fronts in this cyclone which showed a number of peculiarities. Figure 1 shows the stage of filling up. From it the main deviations from the generally valid schemes are to be seen. The displacement of the cold front in the front part of the cyclone can be explained by the fact that the wind at the earth's surface in the northeast square of the cyclone had a component, normal to the front, in the cold air mass of a velocity of 3-7 m/second (figure 1). In the free atmosphere (figures 2,3) the front on the whole lies in the northern stream. In the north-east square neither a warm front nor a

Card 1/3 stream. In the north-east square neither a warm front nor temperature advection corresponding to the latter existed.

The Cold Front in the Front Part of the Cyclone

50-58-5-7/20

Such a frontal motion and the corresponding coolings were not only observed on the day mentioned, but also before and after it. The motion of fronts, as described, although with lower velocities is not rare. The change of the nature of such types of fronts, i.e. the transition of a warm front into a cold front or inversely, will take place where the direction of the isaloobaric gradient and the nature of the thermal advection on high \bar{c} hange. 3 aerological cross sections for the above-mentioned day confirmed this analysis (Figure 5). From it follows that ascending currents are only observed near the intersection of the frontal surface with the earth's surface, then they are replaced by descending currents. The distribution of the vertical currents is in agreement with the observed weather. The inclination of the front in the course of time decreased toward the horizon. On January 5 the front was washed out and transformed into an inversion. The front discussed here as well as the mentioned fronts in "anomalous" cyclones or at western peripheries of the ultm-polar cyclones are masked with regard to the motion. From figures 1 and 2 is to be seen that the cyclone above the Baltic Sea moved in a

Card 2/3

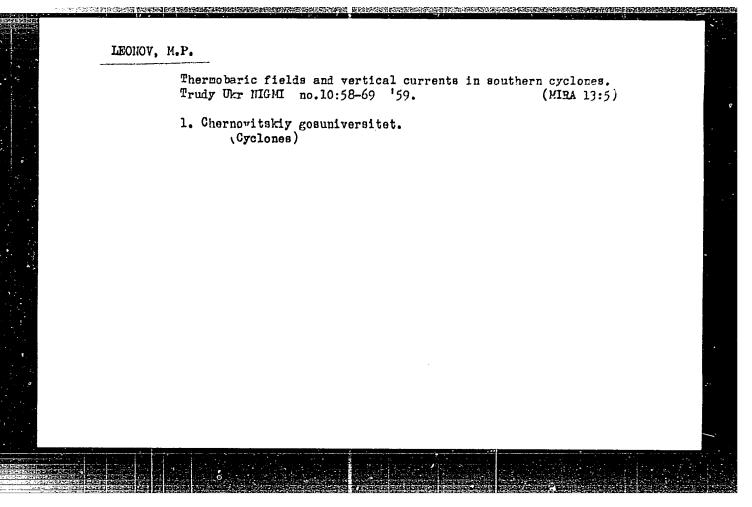
The Cold Front in the Front Part of the Cyclone

50-58-5-7/20

manner that the frontal high zone which determined its development and evolution was not as usual situated at the side of the warm sector, but at the cold side of the cyclone. The spatial axis of the cyclone was inclined to the left of its trajectory. The unusual conditions of motion of the front naturally were connected with the structure and the motion of the cyclone. There are 5 figures.

1. Meteorology 2. Cyclones--Structural analysis 3. Cyclones -- Temperature factors 4. Temperature--Analysis

Card 3/3



L 61732-65 EWT(1)/FCC GW

ACCESSION NR: AT5017683

UR/2599/65/000/047/0030/0050

AUTHOR: Leonov, M. P. (Candidate of geographical sciences)

TITLE: Preliminary results of investigating steady rains from data of a dense rain gage network

SOURCE: Kiyev. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut. Trudy, no. 47, 1965. Voprosy aktivnyki vozdeystviy na atmosfernyye protsessy (Problems of active influences on atmospheric processes), 30-50

TOPIC TAGS: weather station, rainfall, cloud, frontal zone, cyclone

ABSTRACT: From observations at a dense rain gage network of experimental meteorological stations (for the six winter months of 1960-62), a method has been
worked out for investigating fields of steady rains. During the cold part of the
year, the passage of one or several fronts in cyclones and troughs, accompanied
by relatively continuous rain, shows considerable inhomogeneity in the horizontal
distribution of rain. Zones of relatively high and relatively low rain totals
appear. These are oval in outline with an average size, including the adjacent

zones of intermediate precipitation, of less than 100-200 km². The main cause of these zonal patches of steady rain is apparently inhomogeneous structure in the

L 61732-65

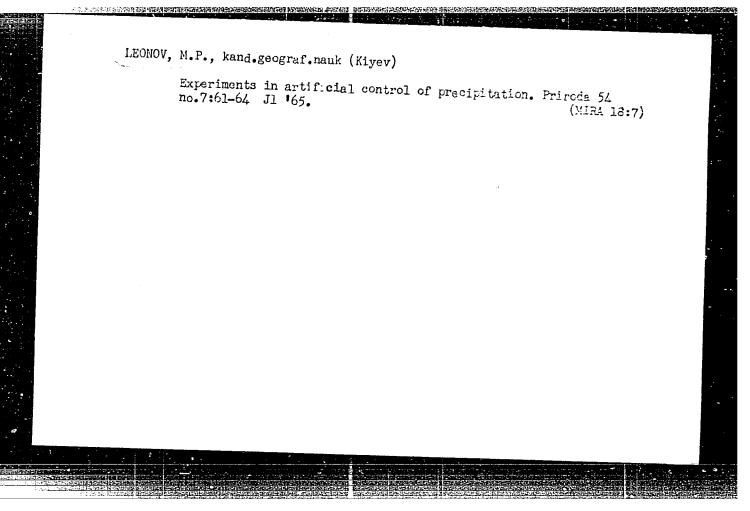
ACCESSION NR: AT5017683

clouds at the front and within the mass. Different kinds of clouds are associated—cumulus and cumulonimbus within nimbostratus and altostratus—and this combination produces patches of high precipitation with intervening zones of low precipitation. The patchiness of steady rains over plains is due in part to large industria, regions as well as to inhomogenaities of cloud structure. It is necessary to obtain average precipitation values, and the areas used for averaging must be considerably larger than the natural zones of high or low rainfall. The optimal area for winter appears to be 100-200 km2. Variability of rainfall in individual is large. Within the area of dense rain gage stations; this variability was on the order of the average rainfall value for the area. On the other hand, the correlation between average rainfall and the corresponding value at individual stations was very good. The great variation in amount of precipitation during steady rains makes evaluation of experimental results difficult. The production of a punch card index of many measurements permits mechanization of the treatment, however, and facilitates interpretation. Larger areas for averaging may be readily adopted, and this leads to smoothing of the precipitation curves. The fact that isobyets differ but slightly and the fact that possible correctable errors are few lead the author to conclude that though steady rains show horizontal variation the basic pattern of this variation is systematic. Orig. art. hast 8 figures, 9 tables, and 4 formulas.

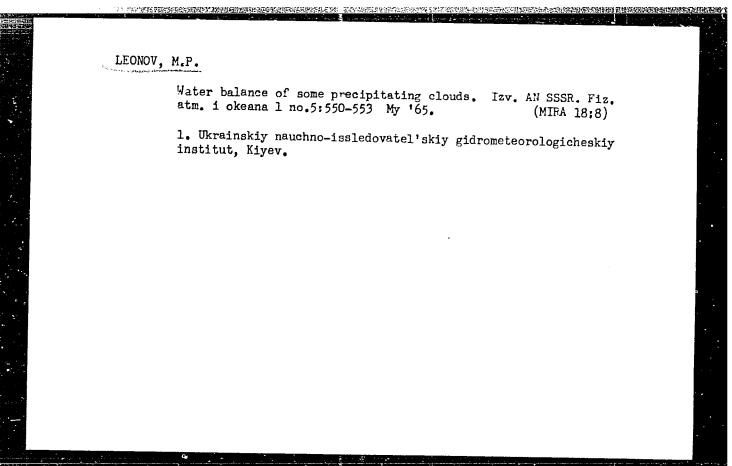
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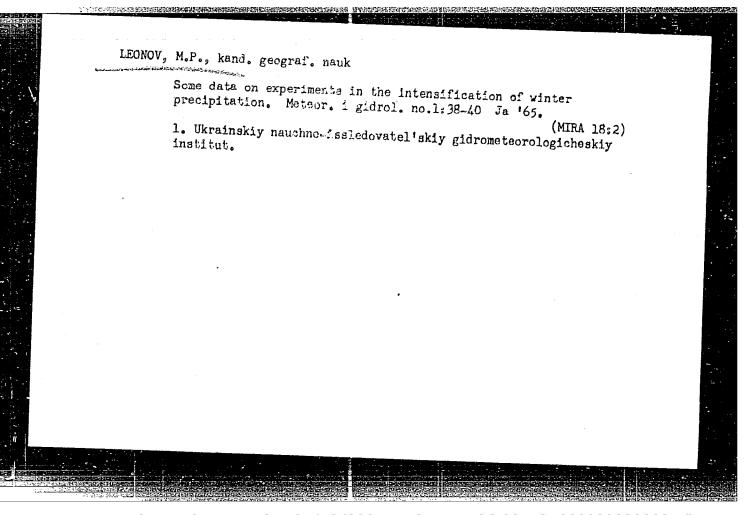
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L-61732-65 ACCESSION NR: AT5017683					
ASSOCIATION: Ukrainski institut (Ukrainian Sc:	y nauchno-issladovatel'skiy gid entific Research Hydrometeorolo	rometeorológicheskiy gical Institute)			
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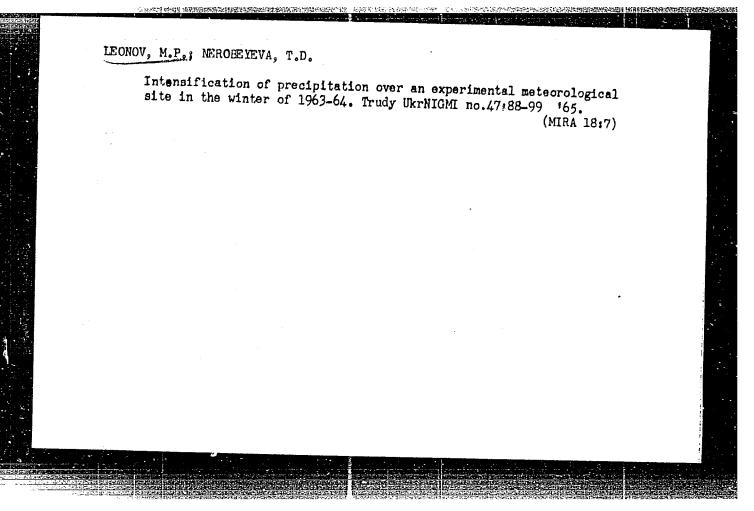


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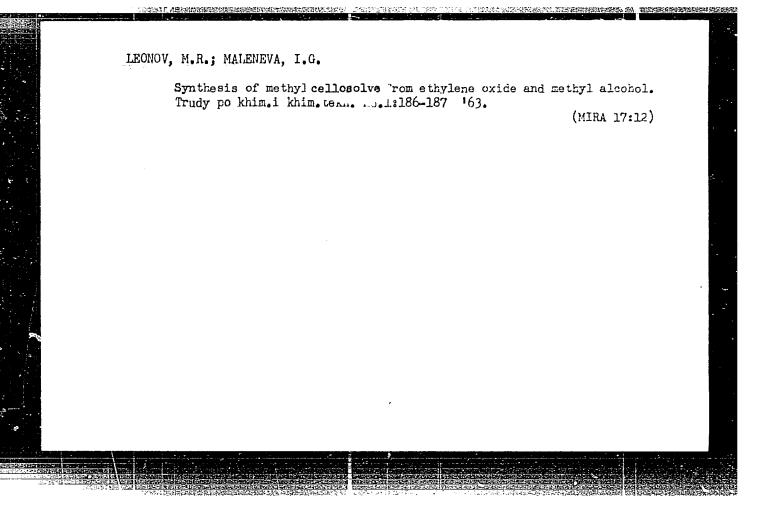


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KORSHUNOV, I.A.; NOVOTOROV, N.F.; AMENITSKAYA, R.V.; OKROKOVA, I.S.;
PESTUNOVICH, N.A.; DUBOVSKAYA, V.N.; LEOMOV, M.R.; GLAZOV,
V.M.

Synthesis of organic compounds tagged with radioactive carbon. Radiokhimia 1 no.6:728-733 '59. (MIRA 13:4)

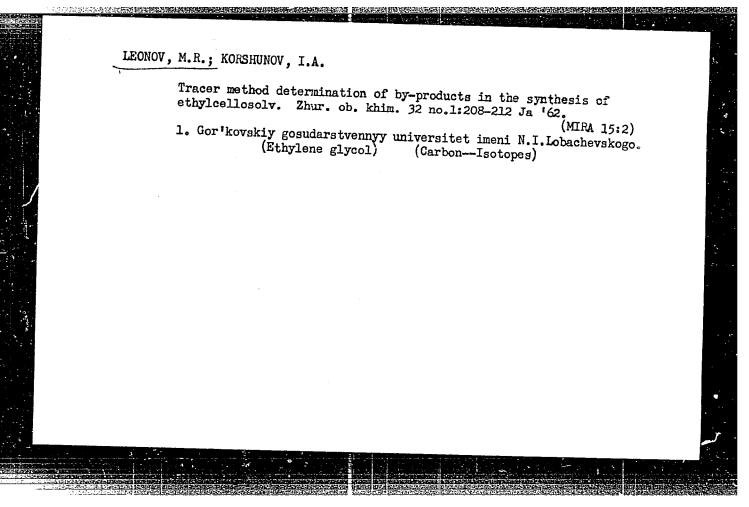
(Carbon--Isotopes) (Organic compounds)



Synthesis of methyl, propyl, and isopropylcellosolves from ethylene oxide and corresponding alcohols. Zhur.prikl.khim. 38

no.6:1367-1373 Je 165. (MIRA 18:10)

1. Institut khimii Gor'kovskogo gosudarstvennogo universiteta imeni N.I.Lobachevskogo.

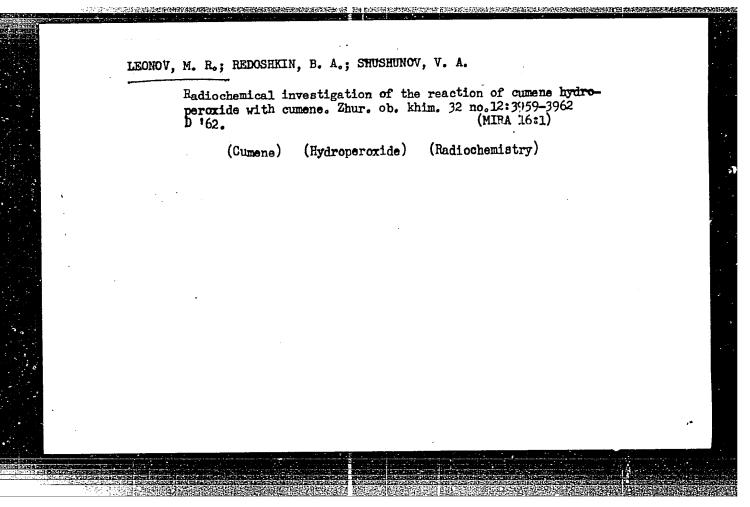


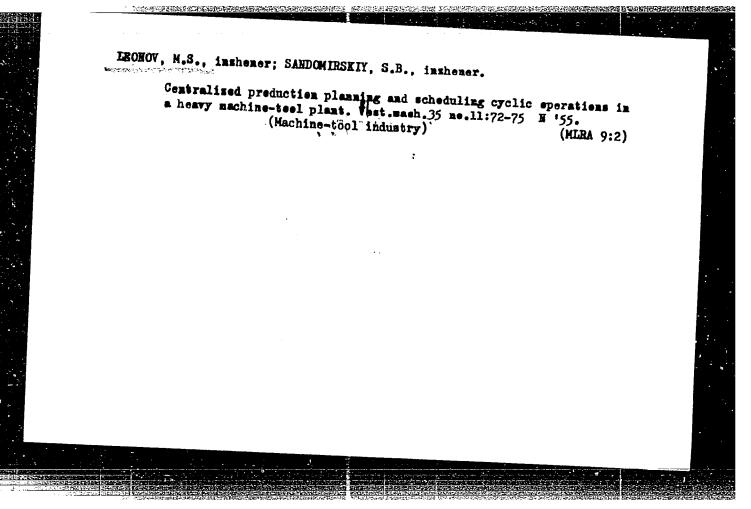
LEONOV, M.R.; KORSHUNOV, I.A.

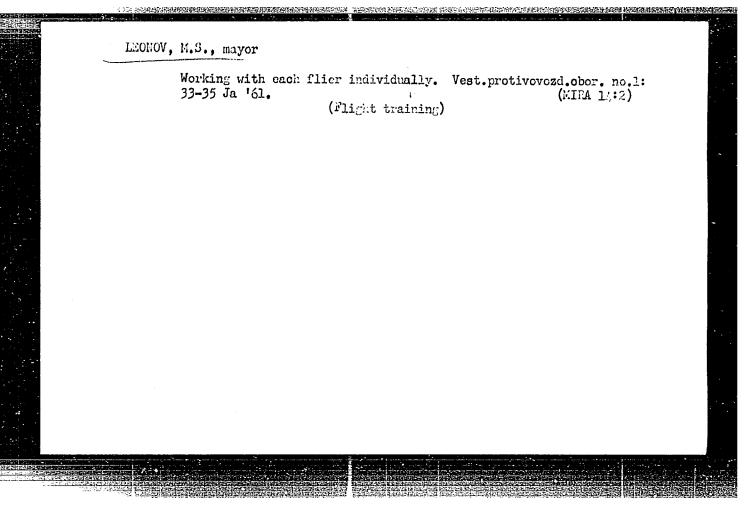
Synthesis of ethyl cellosolve. Zhur.prikl.khim. 35 no.10:23242328 0 '62. (MIRA 15:12)

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imeni N.I.Lobachevskogo.

(Ethanol)

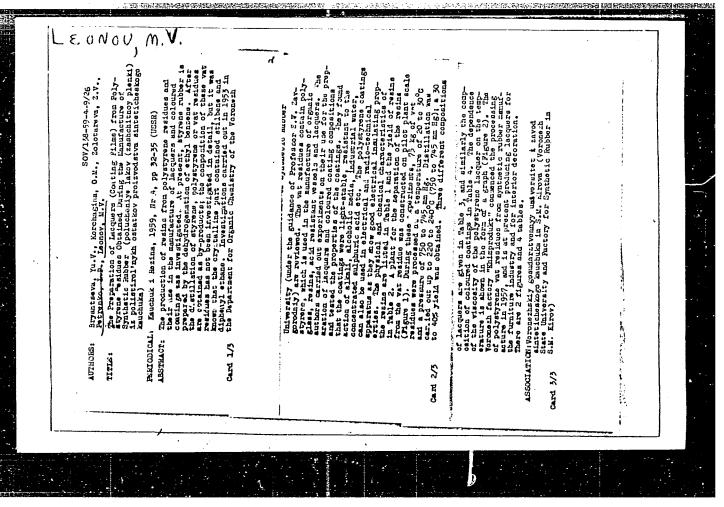




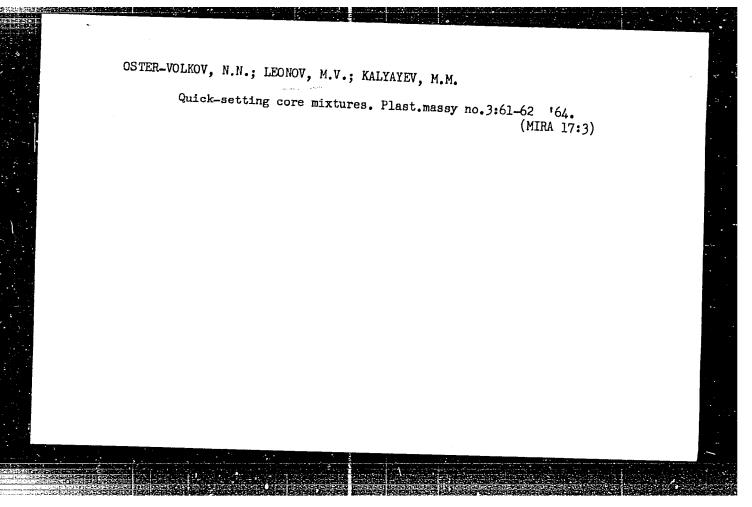


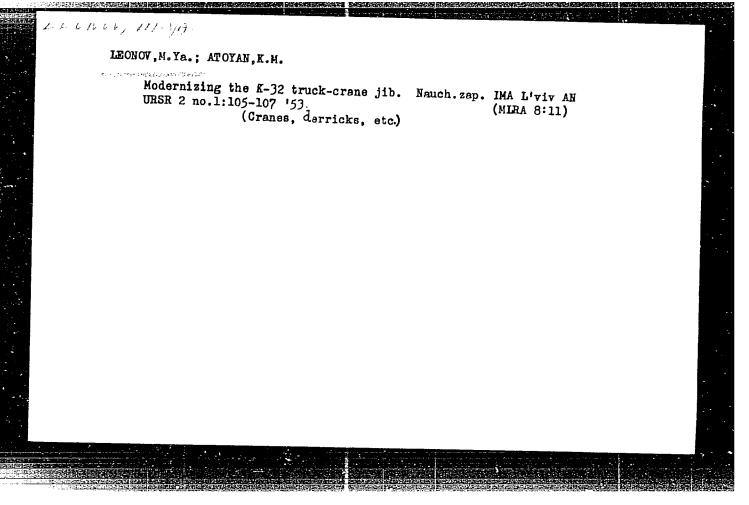
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OURCE: IVUZ. M	ishinostroyeniye, no. 11, 1		\mathcal{B}
phthalate, plasticize ABSTRACT: Epoxy manufacture of stam	r, hexamethylenediamine resins are being used to a p p parts. The ED-5 and ED	reat extent in machine tool -6 epoxy resins, as well as	plants for the ED-40 resin
most important feats compares the wear (and the temperature	ires of these plastics is the of ED-5 and ED-6 epoxy resort the ambient media. The	ir high wear resistance. The considering the heat or importance of the plasticize of friction on the load and tested to test the dry friction and the considering the consider	eated by friction is established imperature is

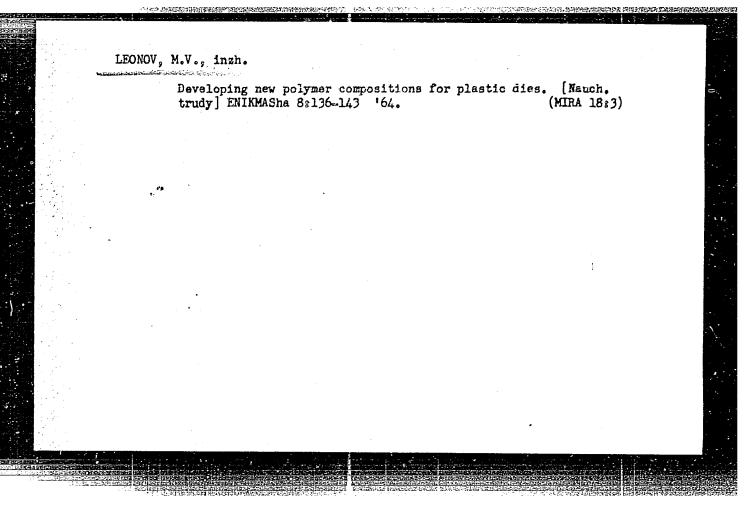
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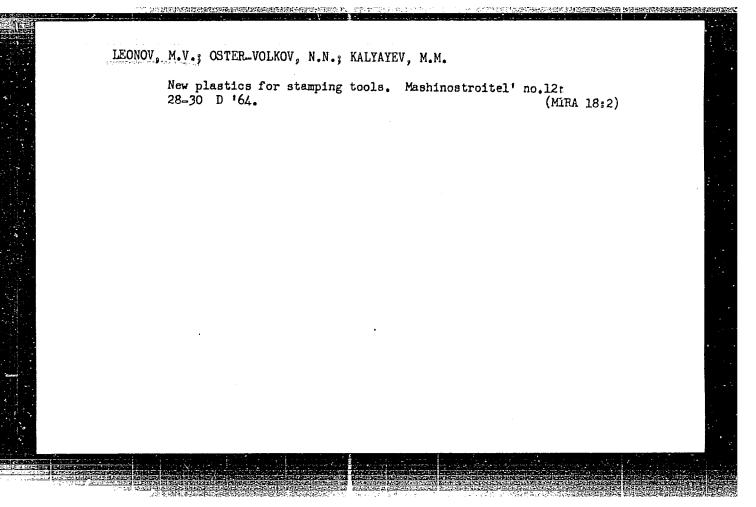
ACCESSION NR: AP5002336

temperature at the point of contact, and also the force of friction. All tests were made without lubricants at 8.5 m/min, and under loads varying from 1 to 20 kg. Each test took 3 hours. The samples were tested either with or without plasticizers, and the hardening agent was hexamethylenediamine. The mixture, consisting of 100 parts by weight of resin. 10 parts of dibutylphthalate (if present) and 20 parts of hexamethylene diamine, was thoroughly mixed and vacuumized. The samples were then cast and hardened at room temperature for 15-20 hours with subsequent heat treatment at 90C 6-7 hours. The tests showed that the ED-5 epoxy resin has certain advantages over the ED-6 resin in relation to wear resistance. The plasticizer (dibutylp thalate) lowered the hardness gomewhat and increased the weight loss during wear. However, at optimal plasticizer content, the increase in weight loss is insignificant and does not affect the adequacy of the plasticized resin for stamp manufacture. The lower loss of weight during wear and higher hardness of the ED-5 epoxy resin without the plasticizer is not of great significance for stamp manufacture, since the other mechanical properties are lower. Cooling of the surface changes the type and degree of wear, preserving the type of surface wear until the loads become higher. Orig. art. has: 7 figures and 1 table.

Card 2/3

ACCESSION NR: AP5002336			
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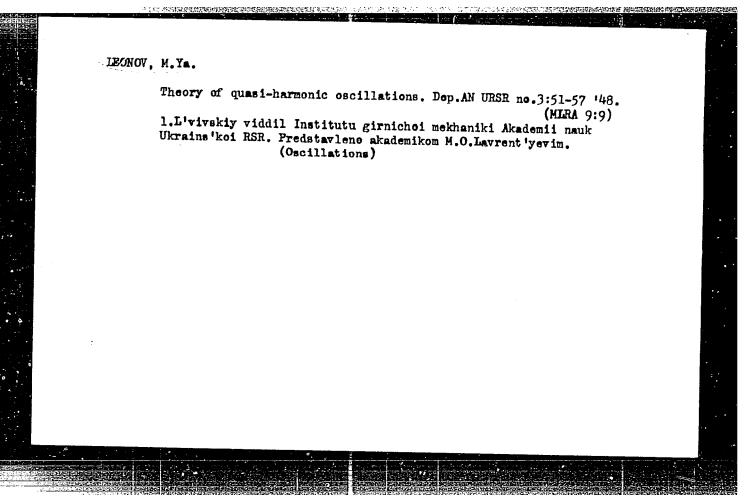




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	ACC NR: AR5020056 SOURCE CODE: UR/0081/65/000/012/S078/S078		
	AUTHOR: Brandman, G.S.; Novokreshchenov, P.D.; Leonov, M.V.		
	ORG: none Add		
	TITIE: Wear of polymer compounds with epoxy resin bases		
	SOURCE: Ref. zh. Khimiya, Abs. 128508	- 1	
	REF SOURCE: Izv. Voronezhsk. gos. ped. in-ta, v. 44, 1964, 140-145		
-	TOPIC TAGS: polymer, epoxy plastic, hardening		
	TRANSIATION: A study was made of the attrition of hardened ED-5 and ED-6 epoxy resins and of compounds based on them with the addition of iron (Zh) powder fillings scur-		
	rently used for coating the corrational parts of plastic stamps, and also of FAED-13 17		
	resin (a mixture of a furfuralacetone monomer FA with FD-6) and of EV-4 ¹⁶ (a mechanical mixture of ED-6 with monomer V-4). Tests on dry friction and wear were made on a	•,	
	Skode-Savin machine at velocities of 8.5 m/min. and pressures of up to 80 kg/cm. A		l
	relation was established between the intensity of attrition and the load and pressure, disregarding the heating caused by dry friction. A study was made also of the effect		: :
	of fillings on the character of the attrition. Research has shown that the FAED-13Zh	,	
	compound had a lower wear resistance than EZh-1 and EV-4Zh. Yu. Zybin.	 , [
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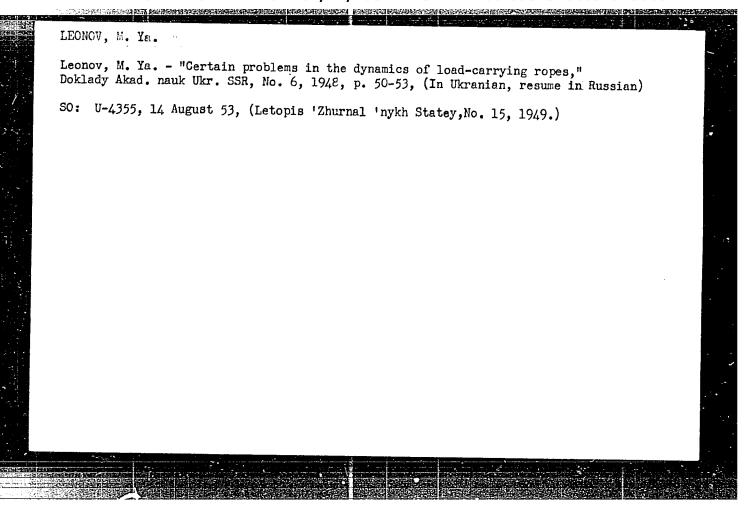
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			a gansi-harmonic oscillations. Applied. Natl. Natl. Nicch. 310 (Russian. English summar.) tions of dynamical systems with on are often reducible to an equation $+D(t)=F(t)$, where $\mu(t)$ is a (riction reduction may be made to the form $=Q(t)$. The author solves (2) by the $(t,\tau)+\int_{-1}^{\infty}f(t,\tau)\sin\varphi(t,\tau)Q(z)dz$.	where G_{x} are arbitrary parameters, φ satisfies the noblinitegral equation $G(x,y) = \int_{x}^{y} G''(y) dt + \int_{y}^{y} \sin 2\varphi(t,y) (\psi dt + dy)$	is given by $f = \exp \left[f - (p(t) + p(\tau) + J(t, \tau)) \right]$ $J(t, \tau) = \int_0^t \{ f dt + \cos 2\varphi(t, \tau) \{ f dt + dp \} \}.$		**************************************	
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LEONOV, M. Ya.

Leonov, M. Ya. - "Torsional oscillations of the crankshaft under steady motor-operating conditions," Doklady Akad. nauk Ukr. SSR, No. 6, 1948

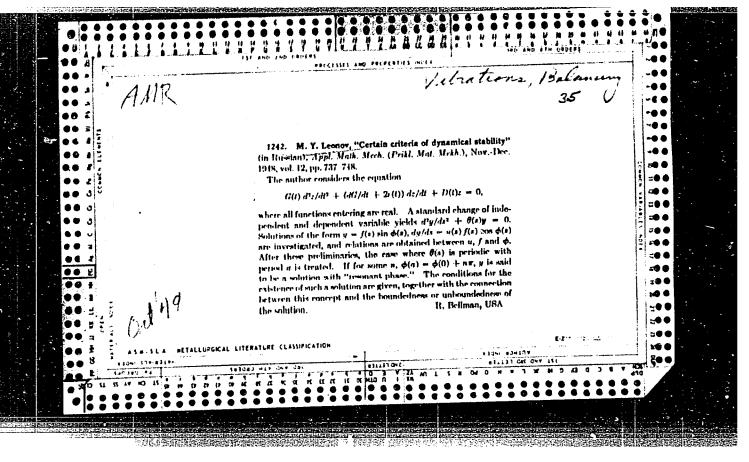
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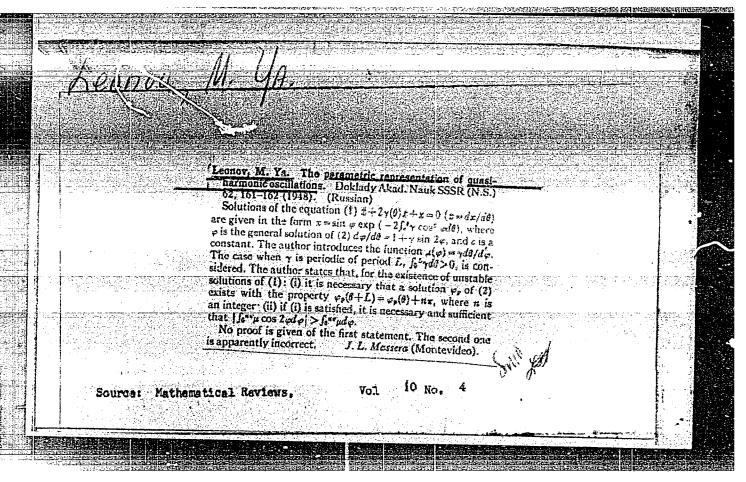


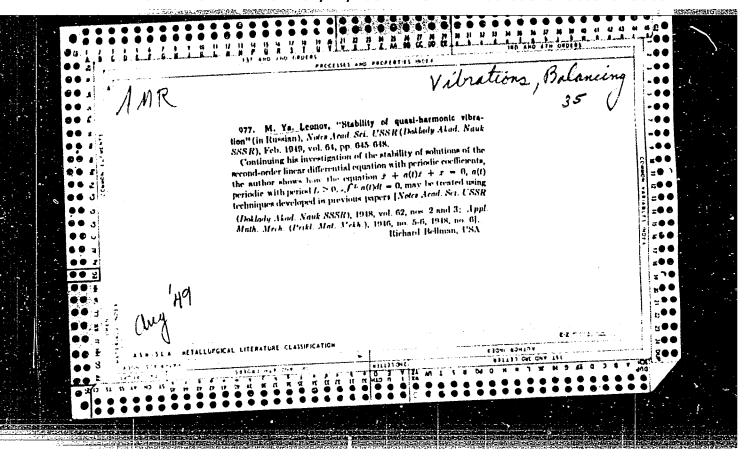
LEONOV, M. Ya

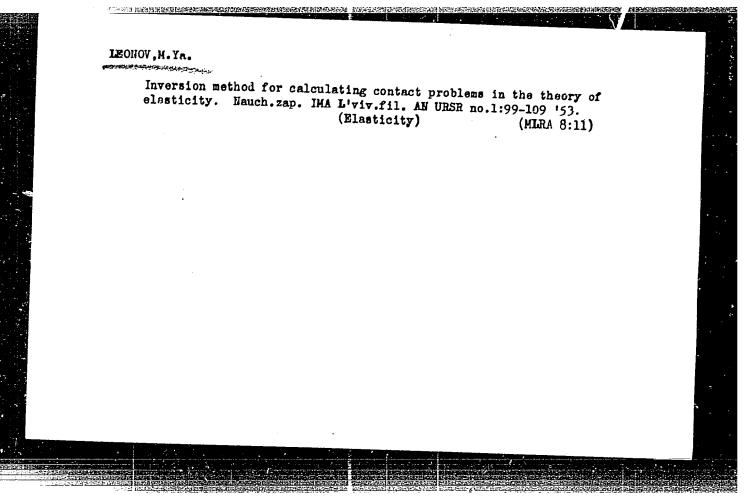
Verbatim: Leonov, M. Ya -"On the study of the damping and frequency of quasi-harmonic oscillations," Doklady Akad. nauk Ukr. SSR, No. 6, 1948, p. 54-56, (In Ukranian, resume in Russian)

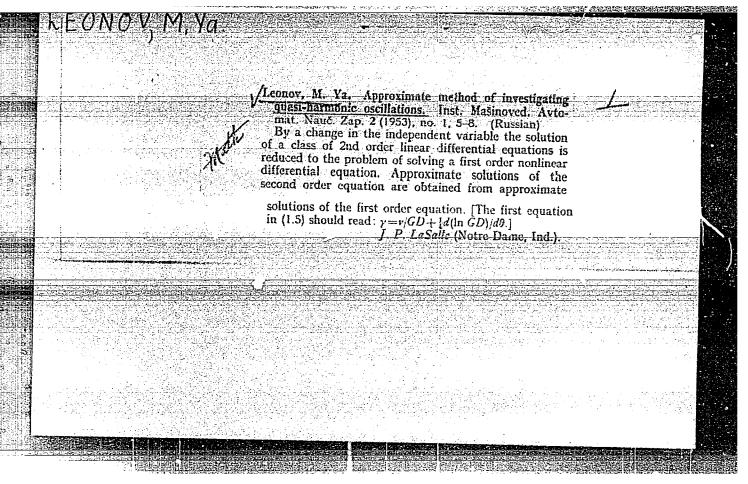
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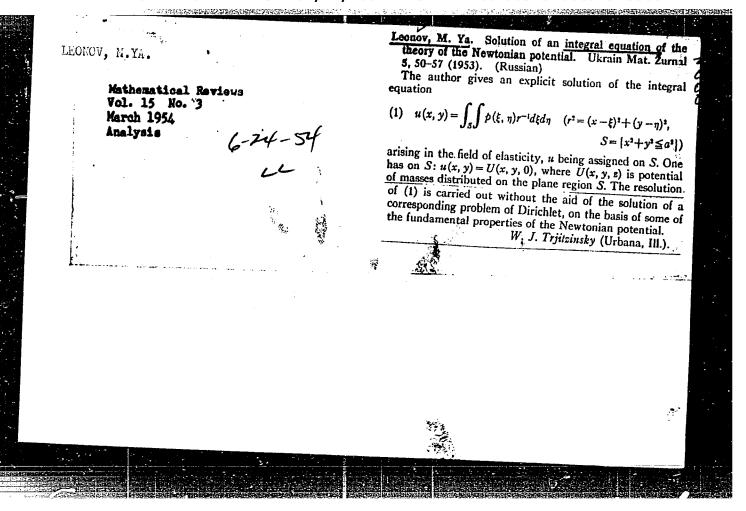


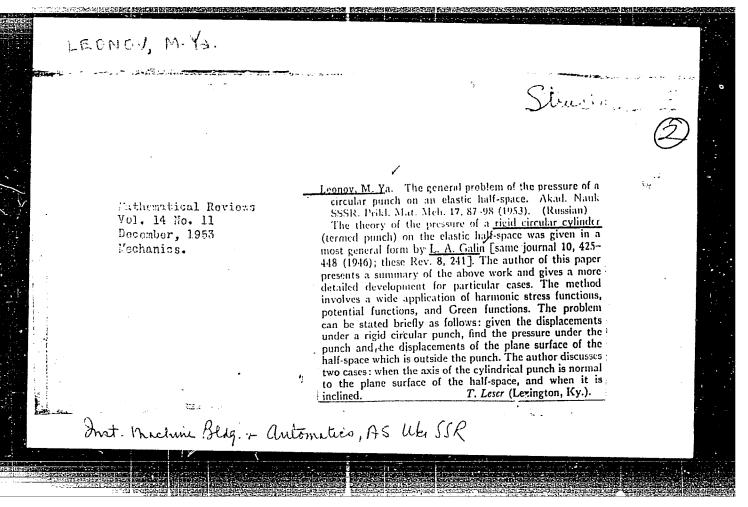












USSR/Engineering - Mechanics

FD-1109

Card 1/1

Pub. 41-3/13

Author

Leonov, M. Ya. and Panasyuk, V. V., L'vov

Title

: Stability of casing tubes

Periodical

: Izv. AN SSSR Otd. tekh. nauk 5, 51-56, May 1954

Abstract

: Investigates the possible loss of stability of a long tube subjected to uniform pressure by an elastic body. This kind of problem is encountered in the study of the stability of casings and similar underground structures. The problem is solved under conditions of plane deformation of the tube and elastic body, being reduced to a study of the deformation of an infinitely elastic plane with a circular hole whose edge is rein-

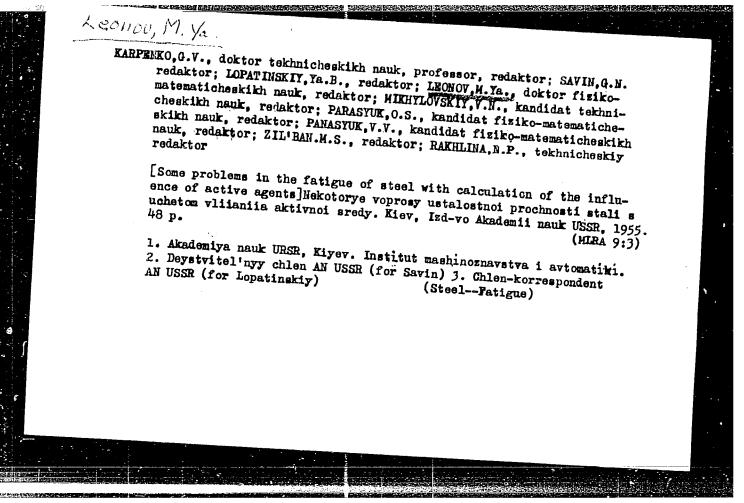
forced by a thin elastic ring. Graphs, table. One reference.

Institution : Institute of Machine Studies and Automatics of the Academy of Sciences

of the UkSSR

Submitted

: February 15, 1954



LEO//OV, MYA USSR/Physics - Unstable equilibrium

FD-3093

Card 1/1

Pub. 85 - 8/16

Author

: Kopeykin, Yu. D.; Leonov, M. Ya. (L'vov)

Title

: A special case of loss of stability of equilibrium of a compressed rod

Periodical

: Prikl. mat. i mekh., 19, Nov-Dec 1955, 736-737

Abstract

: In the determination of loads causing loss of stability of definite forms of equilibrium of elastic systems one ordinarily finds those loads for which there exist along with the investigated one other forms of equilibrium. In the present note the author presents an example for which the method of Euler cannot give the solution of the problem. He considers a rod held fast at one end and centrally loaded at the free end by a longitudinal force which remains normal to the terminal cross-section during bending of the rod. The author claims that V I. Fedos'yev's book (Izbrannyye zadachi i voprosy po soprotivleniyu materialov [Collected tasks and problems on resistance of materials], GTTI, p. 165) gives an erroneous derivation of stability of a rod under any magnitude of the compressional force.

Institution

Submitted

September 15, 1954

USSR/Physics - Stability of compressed rod

FD-3094

/ E01/0V, M Pub. 85 - 9/16

Author

: Deymeko, K. S.; Leonov, M. Ya. (L'vov)

Title

: Dynamic method for investigation of the stability of a compressed rod

Periodical

: Prikl. mat. i mekh., 19, Nov-Dec 1955, 738-774

Abstract

: The authors calculate the loss of stability of a rod compressed by a following force, with uniformly distributed mass in the rod. They discuss the differential equation for the transverse oscillations of a rod compressed by an axial force. The rod studied in this note is assumed to be held fixed at one end and centrally loaded at the free end by a longitudinal so-called following or tracking force directed tangentially to the rod's axis. The authors find the influence of the distribution of masses in the rod upon the magnitude of the critical force. They discuss the applicability of their approximate methods of determination of critical force in the case of non-conservative forces.

Institution

Submitted

: March 18, 1955

CIA-RDP86-00513R000929230002-4 "APPROVED FOR RELEASE: 07/12/2001

SOV/124-57-4-4596

THE REPORT OF THE PROPERTY OF

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 4, p 104 (USSR)

Leonov, M. Ya. AUTHOR:

An Approximate Solution to a Torsional Problem (Priblizhennoye TITLE:

resheniye zadachi o kruchenii)

Nauch. zap. In-ta mashinoved. i avtomatiki AN UkrSSR, 1956, PERIODICAL:

Vol 5, pp 41-45

ABSTRACT: For the purpose of computing the tangential stresses arising during

torsion of a solid rod at "points" on the boundary contour Γ of the

cross section B of the rod, the author derives the following formula

 $\tau = G \vartheta \left(2h - \frac{h^2}{\rho}\right)$ (1)

where G is the shear modulus, ϑ the angle of twist, ρ the curvature of the contour Γ at a given point A, and h the length of a segment of normal to [Transl. Note: Blank space in Russian original. Probably "I"] at point A and extending from A to the intersection with the

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"central" section line, the latter being defined as the locus of the

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centers of circles belonging to B and being tangent to Γ in at least two points. The evaluation of the error of formula (1), given only for the case of a rod with an elliptical cross section (as a function of the ratio of the semiaxes of the ellipse which is made to vary from 0 to 12.5%), does not furnish sufficient information to determine the applicability of the formula to a wide variety of cases owing to the approximate nature of the derivation of said formula.

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SOV/124-58-2-2077

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 2, p 82 (USSR)

AUTHORS: Leonov, M. Ya., Panasyuk, V. V.

TITLE: On the Approximate Determination of Torsional Stiffness (O pribli-

zhennom opredelenii zhestkosti pri kruchenii)

PERIODICAL: Nauchn. zap. In-ta mashinoved. i avtomatiki. AN UkrSSR, 1956. Vol 5, pp 46-50

ABSTRACT: For the determination of the torsional stiffness of a thin walled bar the author adduces the approximate formula

 $C = \frac{4}{3} G \oint h^3(s) ds \tag{*}$

where h(s) is the distance from a given point on the contour to the center line (Leonov, M. Ya., Nauchn. zap. In-ta mashinoved. i avtomatiki AN UkrSSR, 1956, Vol 5, pp 41-45; RZhMekh, 1957, Nr 4, abstract 4596) and the integration extends over the entire contour. The stiffness is computed according to formula (*) for cases in which the cross section is a circular sector and a rectangle. The approximate results obtained are compared with exact results. The paper fails to provide a rigorous assessment

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On the Approximate Determination of Torsional Stiffness
of the limits of applicability of formula (*).

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